

## ABSTRACT OF THE DISCLOSURE

A startup circuit for a power converter including an amplifier circuit, a comparator, and startup logic. The power converter includes an error amplifier that compares an output sense signal with a startup reference signal and that provides a compensation signal. The amplifier circuit charges the startup reference signal to a predetermined reference level based on a second reference signal in response to a start signal. The comparator determines when the compensation signal reaches a predetermined ramp level and asserts a startup complete signal indicative thereof. The startup logic provides the start signal and provides an output enable signal in response to the startup complete signal. The output enable signal enables output switching to initiate normal regulation operation of the output voltage. In one embodiment, the predetermined ramp level is approximately the center voltage of a sawtooth regulation waveform used for PWM modulation.